

Appl. No. 10/786,567
Amdt. Dated March 31, 2006
Reply to Office Action of January 9, 2006

Attorney Docket No. 83388.0017
Customer No.: 26021

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An electrode substrate comprising
a substrate,
a lower electrode,
an insulating film having a liquid-repellent region and a liquid-attracting region on a surface thereof and an upper electrode,
wherein the lower electrode, the insulating film and the upper electrode are layered in this order on the substrate;
wherein a pattern shape of the lower electrode generally matches with that of the liquid-repellent region on the surface of the insulating film; and
wherein the upper electrode is formed mainly on the liquid-attracting region excluding the liquid-repellent region on the surface of the insulating film, such that the pattern shape of the upper electrode is a self-aligned shape in which the pattern shape of the lower electrode is generally reversed.

2. (Original) A thin film transistor comprising the electrode substrate according to claim 1 and a semiconductor film, wherein, on the electrode substrate, a gate electrode is formed as the lower electrode, and a source electrode and a drain electrode are formed as the upper electrodes on the respective liquid-attracting regions isolated into two or more regions by the liquid-repellent region formed on the surface of the insulating film in a pattern shape that generally matches with the lower electrode, such that the pattern shape of the upper electrodes is a self-aligned shape in which the pattern shape of the gate electrode, i.e., the lower electrode, is generally reversed; and wherein the semiconductor film is formed such

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that it extends over and covers at least a part of each of the source electrode, the drain electrode and the surface of the insulating film (gate electrode region) lying therebetween over/on said electrode substrate.

3. (Original) An active matrix thin film transistor substrate comprising the electrode substrate according to claim 1 and thin film transistors having semiconductor films, wherein, on the electrode substrate, a plurality of gate wirings/electrodes is formed as the lower electrodes, and a plurality of signal wirings, source/drain electrodes and pixel electrodes are formed as the upper electrodes on the liquid-attracting regions isolated into a plurality of regions by the liquid-repellent regions formed on the surface of the insulating film in a pattern shape that generally matches with the lower electrodes; wherein the semiconductor films are formed such that they extend over and cover at least a part of each of the source electrodes, drain electrodes and liquid-repellent regions (gate wiring/electrode regions) on the surface of the insulating films lying therebetween over/on the electrode substrate; and wherein the thin film transistors are each placed at each intersection of the gate wiring and signal wiring.

4. (Original) The active matrix thin film transistor substrate according to claim 3, wherein a plurality of gate wirings/electrodes, having a shape in which a plurality of adjacently placed ring-shaped rectangles each having an opening are connected to each other at least at one or more locations, are adjacently placed to each other as the lower electrodes; wherein signal wirings and source/drain electrodes are each formed on the space between said rectangles in a continuous shape spreading over the connection in a self-aligned manner with respect to said gate wirings/electrodes as the upper electrodes; and wherein the pixel electrodes are each formed in an opening of said ring-shaped rectangle.

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5. (Original) The active matrix thin film transistor substrate according to claim 4, wherein a width of the connection part for connecting each of a plurality of rectangles each having an opening for composing gate wirings/electrodes and a width of a space between a plurality of gate wirings/electrodes are smaller than a width of a space between a plurality of rectangles each having an opening for composing gate wirings/electrodes.

6. (Original) A liquid crystal, electrophoresis, or organic electroluminescent display device, which comprises the thin film transistor substrate according to any one of claims 3 to 5 as an active matrix switch.

7. (Original) An RFID device, which comprises the thin film transistor according to claim 2 as at least a part thereof.

8. (Original) The electrode substrate, thin film transistor and active matrix thin film transistor substrate according to any one of claims 1 to 3, which comprises a photosensitive liquid-repellent monolayer comprising a carbon chain in which at least a part thereof is terminated with fluorine or hydrogen as a photosensitive liquid-repellent film.

9-10. (Cancelled).

11. (Currently Amended) The electrode substrate according to claim 1, wherein at least one of the substrate and the insulating film is formed by a material that does not transmit a light with a photosensitive wavelength of the **photosensitive** liquid-repellent film.

12. (Currently Amended) The thin film transistor according to claim 2, wherein at least one of the substrate and the insulating film is formed by a material that does not transmit a light with a photosensitive wavelength of the **photosensitive** liquid-repellent film.

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13. (Currently Amended) The active matrix thin film transistor substrate according to any one of claims 3 to 5, wherein at least one of the substrate and the insulating film is formed by a material that does not transmit a light with a photosensitive wavelength of the **photosensitive** liquid-repellent film.